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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,720	08/22/2001	Shihab Al-Kuran	7174-134-999	2229

7590 09/08/2005

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EXAMINER
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
BERHANE, ADOLF D

ART UNIT	PAPER NUMBER
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2838

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/042,720	Applicant(s) AL-KURAN ET AL.	
	Examiner Adolf Berhane	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Sandstrom (3,447,041).

Applicant's admitted prior teaches the claimed invention except for a start-up circuit. Sandstrom teaches the use of a start-up circuit in a controlled rectifier circuit. Applicant's admitted prior art discloses in Fig. 2, a converter (200), differential oscillator (210), which produces an AC voltage, a rectifier (220) which rectifies the produced AC voltage to DC voltage consists of diodes D1 and D2 and the differential oscillator (210) consists of symmetric inductors L1 and L2, capacitors C1 and C2 and transistors M and M2. Sandstrom teaches the use of a diode as a voltage limiting diode to protect the rectifier circuit. It would have been obvious to one having an ordinary skill in the art at the time of the invention to provide a diode as taught by Sandstrom in Applicant's admitted prior art Fig.2 at the output of the rectifier circuit in order to protect the load from voltage build and protect the circuit by limiting the voltage.

3. Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Sandstrom as applied to claim 1 above, and further in view of Rozman (RE 36571).

Applicant's admitted prior art and Sandstrom teach the claimed invention except for the rectifier circuit consisting of transistors. Rozman teaches the use of transistors in a rectifier circuit of a power converter circuit. It would have been obvious to one having ordinary skill in the art at the time of the invention to replace the rectifier diodes of Applicant's admitted prior art Fig. 2 with a rectifier transistors in order reduce the voltage drop across the rectifier and increase the efficiency of the power converter.

4. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Rozman (RE 36,571).

Applicant's admitted prior teaches the claimed invention except for the rectifier circuit consisting of transistors. Rozman teaches the use of transistors in a rectifier circuit of a power converter circuit. Applicant's admitted prior art discloses in Fig. 2, a converter (200), differential oscillator (210), which produces an AC voltage, a rectifier (220) which rectifies the produced AC voltage to DC voltage consists of diodes D1 and D2 and the differential oscillator (210) consists of symmetric inductors L1 and L2, capacitors C1 and C2 and transistors M and M2. It would have been obvious to one having ordinary skill in the art at the time of the invention to replace the rectifier diodes of Applicant's admitted prior art Fig. 2 with a rectifier transistors in order reduce the voltage drop across the rectifier and increase the efficiency of the power converter.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolf Berhane whose telephone number is 571-272-2077. The examiner can normally be reached on Monday- Friday 8 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Adolf Berhane  
Primary Examiner  
Art Unit 2838